Standing Committee on Standards
Report to the 2009
NCSS Conference,
Las Cruces, New Mexico

Committee Members:

Co-Chairs: Craig Ditzler (NRCS) and Wayne Robbie (USFS)
Members: Anderson, Debbie - Raleigh, NC, Brannon, Greg - Auburn, AL,, Earles, Eddie - Prince Frederick, MD, Ferguson, Henry, Morgantown, WV, Finn, Shawn - Amherst, MA, Glover, Leslie - Pine Bluff, AR, Gordon, James - Temple, TX, Indrick, Steven - Syracuse, NY, Janis Boettinger - Utah State Univ., Loerch, Cameron - Lincoln, NE, Park, Steve - Lakewood, CO, Remley, Chad - Salina, KS, Shurtliff, Daniel - Huron, SD, Southard, Susan - Davis, CA, Teater, Bill - Springfield, IL, Thomas, Pam - Columbia, SC, Thorson, Thor - Portland, OR, Whited, Michael - St. Paul, MN.

Charges:

1. Review NSSH 630 – "Benchmark Soils" and suggest needed revisions and clarifications.
2. Review proposal by Fanning and Rabenhorst to revise the definitions of:
   - Sulfidic Materials
   - Sulfuric Horizon

Deliberations:

The committee carried out its work through three rounds of discussion (via email) where efforts were focused on identifying needed clarifications/revisions to NSSH Part 630 Benchmark Soils, and in one teleconference where the NSSH revisions were reviewed as well as the acid sulfate soil proposed revisions.. Three breakout sessions during the conference at Las Cruces were used to present results to those attending the breakout sessions.

Summary of the work:

1) Benchmark soils., revisions to NSSH..We felt that the presentation of the definition of a benchmark soil could be improved by setting it apart as a clear, stand-alone item in the text. We also added that it is in the context of an MLRA and also that it is of ecological significance.

A section listing responsibilities for the new MLRA-Soil Survey Offices was developed which points to their role in evaluating and proposing changes to the list for their area of responsibility. We also clarified that the MLRA Soil Survey Regional Office (MO) has final authority for appoving changes and maintaing the official record of benchmark status in the soil classification database.

Improvements were made to the discussion of the criteria for evaluating benchmark status. These included evaluating extent in the context of the benchmark series, plus other series it represents as a benchmark soil. We clarified that taxonomic duplication is

assessed in the context of the MLRA, not the entire national list of benchmark soils. A discussion about the meaning of "data completeness" was added. We also recommended that factors such as major parent materials and land forms, as well as ecological importance be considered in evaluating benchmark soils for the area.

The committee members endorsed the continued use of a narrative record for each benchmark soil. This report should include a list of soils that the benchmark soil represents.

The committee recognized a need to enhance our databases with regard to benchmark soil recognition. There are plans underway to eventually bring the current soil classification file and official series description databases into NASIS and this will be the appropriate time to add needed enhancements relative to benchmark soil status.

2. Acid Sulfate Soils - proposed changes to the definitions of the Sulfuric Horizon and to Sulfidic Materials. The proposal by Fanning and Rabenhorst provides updateed revisions to the background text in Soil Taxonomy, corrects some existing small errors in the current discussion and definitions, and revises the required characteristics to better reflect current knowledge about these soils.

Sulfidic Materials Proposed Changes. The incubation procedure length is revised from the current 8 weeks to allow it to extend to 16 weeks or more if the pH is still dropping. In addition, a second criteria is added to the identification of sulfidic materials to recognize materials with high S content that do not reach low pH on incubation due to buffering, but can still produce acid drainage waters. This mirrors curent criteria in the World Reference Base.

Sulfuric Horizon Proposed Changes. The proposed revisions would allow pH between 3.5 and 4.0 if sufficient levels of sulfuric acid producing minerals are present in the material. The proposal also deletes the present color criteria because it has been shown to be inaccurate in identifying the presence of jarosite.

Recommendations

1. The NSSC Standards Staff should take steps needed to implement the proposed revisions to NSSH 630 – Benchmark Soils.
2. As soon as the policy is released, MLRA-SSO management teams should ensure that the guidance is used in evaluating the current BMS list, and that BMS are considered in guiding soil survey projects and investigations.
3. As SC/OSED are integrated into NASIS: the OSED should be enhanced to indicate that a soil is a BMS, and in which MLRA('s). Provision should be made to include the Benchmark Soil Narrative Record as part of the database so it can be accessed and delivered as needed.
4. NSSC Standards Staff should take steps needed to include the revisions for acid sulfate soils into the 11th edition Keys to Soil Taxonomy.